About this collection: Technical Courses of the Royal School of Bridges and Roads (1842-1843)

Upon my father's death, I discovered in his library — which he had inherited from his mother, who in turn had inherited it from my grandfather, and so on — a bound manuscript entitled "***Railway Course***" and labelled "***No. 15***".

Unfortunately, he did not possess the other volumes...

I believe I know who the author is — an engineer and professor who worked for many years both at this institution and in the field, helping to develop the French railway network and seaports — but in the absence of formal proof, I prefer to withhold his name.

I decided to transcribe it into a "readable" format and discovered that, besides the 64 pages of the railway course, the work also contained:

- A 107-page course entitled "***Notes on Applied Mechanics — Royal School of Bridges and Roads (1842-43)***"
- Followed by another of 65 pages entitled: "***Notes taken by students during the Port Construction course — Royal School of Bridges and Roads (1842-43)***"

This mention of "Notes taken by students" is also found for the railway course.

Nature of the documents

These are not simply a collection of student notes, but an ***enriched transcription***: the developments related to questions asked during the lessons are integrated, thus expanding the knowledge transmitted.

Thus, the Railway Course, whose initial objective was described as:

> "The following lessons are not intended to be a complete course on railways, but merely a description of the works on the Paris-Orléans railway with some general considerations."

... actually enriches itself with general elements of the utmost importance for, among other things, understanding the urban architecture around the Parisian stations.

On reading the documents

These texts are not popularised works. They are ***real courses intended for future engineers***, which explains why they are punctuated by mathematical equations serving the discourse.

I know from experience that many readers close a document as soon as an equation appears, even if it is explained in detail just after. Therefore, I recommend that if mathematics puts you off, you ***skip the equation and continue reading***. This advice applies more particularly to the *Railway Course*; *Port Construction* is much more restrained. As for *Applied Mechanics*, it is truly a fundamental course requiring a certain level of mathematical ability to follow.

Quality of the files provided

These documents are ***not the result of OCR***, but of a ***complete palaeographic transcription*** of the original manuscripts; all equations have been transcribed as mathematical objects (using LibreOffice).

Initially, transcription errors had crept into some equations of the *applied mechanics course*. During the translation provided by AI for the Russian and English versions of these courses, I was treated to masterful demonstrations on some of them, pointing out errors. Thus, I was able to correct some incorrect entries, but in other cases, referring to the manuscript, the edited text perfectly matched the original.
It should be noted that I sometimes received demonstrations starting from a suspicion of error and ending with an "ok". In other cases, a remark was made: "unclear". In two specific cases, a demonstration indicated an error, but was inconsistent with the basic variable declarations and/or the reference equations previously established.

Nevertheless, the author may have made mistakes, which were corrected during the lessons, but which remain in the manuscript.

Despite these corrections, it is entirely possible — even certain — that errors have crept in, particularly in the equations. This is why you will find here:

- Editable ***ODT*** versions, with ***comments*** indicating the corresponding page of the original manuscript.
- ***High-resolution scans*** of the originals, in the form of compressed archives, allowing direct verification.

Illustration plates

I have made a particular effort to "clean" the scans of these plates in order to insert them at the end of each document, reducing their size and definition so as not to increase the "weight" of the latter.
The raw and cleaned high-definition versions are in specific ".zip" folders.

Unpublished

Last but not least: these documents are ***completely unpublished***. Apart from myself, at the time of this writing, no living person has had access to them.

Supplementary documents

Specific terms of maritime construction, as well as of marine terminology in general, are sometimes difficult to grasp. This is why I have added a brief marine glossary giving their definitions taken from a number of French and Russian sources.
Similarly, as the concept of door-boats is very difficult to understand, I have added a specific document, originating from the School of Bridges and Roads, describing them in more detail than in the glossary.

Enjoy reading, and enjoy (re)discovering this French technical heritage.

Chtonomute
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